

Title (en)
IMMERSION COOLING SYSTEM

Title (de)
TAUCHKÜHLSYSTEM

Title (fr)
SYSTÈME DE REFROIDISSEMENT PAR IMMERSION

Publication
EP 4329450 A1 20240228 (EN)

Application
EP 23174925 A 20230523

Priority
• US 202263401365 P 20220826
• CN 202211592098 A 20221212

Abstract (en)
An immersion cooling system (100) includes a pressure seal tank (110), an electronic apparatus (120), a pressure balance pipe (130) and a relief valve (140). The pressure seal tank (110) is configured to store coolant (115). A vapor space (115B) is formed in the pressure seal tank (110) above the liquid level (115A) of the coolant. The electronic apparatus is completely immersed in the coolant. The pressure balance pipe (130) has a gas collection length. The first port of the pressure balance pipe (130) is disposed on the top surface of the pressure seal tank (110). The relief valve (140) is disposed on the second port of the pressure balance pipe (130). The second port is farther away from the top surface of the pressure seal tank than the first port. The gas collection length of the pressure balance pipe (130) allows the concentration of vaporized coolant at the first port to be greater than the concentration of vaporized coolant at the second port.

IPC 8 full level
H05K 7/20 (2006.01)

CPC (source: EP US)
H05K 7/203 (2013.01 - EP); **H05K 7/20327** (2013.01 - EP); **H05K 7/208** (2013.01 - US); **H05K 7/20836** (2013.01 - US)

Citation (search report)
• [XAI] US 2022264761 A1 20220818 - KEEHN NICHOLAS ANDREW [US], et al
• [A] CN 204272576 U 20150415 - LYULIANG MILITARY AND CIVILIAN INTEGRATION COLLABORATIVE INNOVATION RES INST

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4329450 A1 20240228; US 2024074119 A1 20240229

DOCDB simple family (application)
EP 23174925 A 20230523; US 202318314466 A 20230509